

**Comparative fisheries ecology on three tonguefish species, genus *Cynoglossus*,  
from the Yosu coast, Korea and the Seto Inland Sea, Japan**

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A lot of three tonguefish species, *Cynoglossus robustus*, *C. abbreviatus* and *C. joyneri*, family Cynoglossidae, are distributed from the Southern Japan and the Yellow Sea to the South China Sea. Though they have commercial value as food, there is a little information about the fisheries ecology of them. In the present study, comparative fisheries ecology among species and districts of these three tonguefish species taken from the Yosu coast, Korea and the Seto Inland Sea, Japan, were investigated for suitable exploitation as fisheries resources. The Yosu coast is the main habitat of the three kinds of tonguefish, while the Seto Inland Sea is the marginal one. Samples were taken almost monthly from June 2000 to December 2001 and were studied on morphology, age and growth, mature and spawning and food habits.

As the results, it is made clear that *C. robustus* and *C. abbreviatus* habit more offshore and grow larger relatively than *C. joyneri*. *C. robustus* especially grow fast and spawn in summer, while *C. abbreviatus* grow slowly to be the biggest among three tonguefish species and spawn in spring. Many *C. joynerii* inhabit the coastal sea area. This species is small-sized with medium growth rate between *C. robustus* and *C. abbreviatus* and spawn in summer. Three tonguefishes are taxonomically closely related each other, cohabit macroscopically on sandy and/or muddy bottoms, and also feed on resemble organisms, however, they struggle to avoid the competition each other by evolving the different ecological features.

Further, there was little differences in the ecological features such as morphology, age and growth, and mature and reproduction between two populations in each three species in both seas of the Yosu coast and the Seto Inland Sea. However, in spite of the similar food habits of both populations there was some seasonal difference in kind and amount of food organisms, which were seemed to be the caused of the environment.

It is summarized that the ecological features of these three tonguefish species from the Yosu and the Seto differed hardly each other. Slightly, there was a little difference in food habits depending on the environment of the Seas.

For suitable exploitation of three kinds of tonguefish and/or their populations as fisheries resources, we should consider the ecological features mentioned the above.

**Key words:** tonguefish, *Cynoglossus robustus*, *C. abbreviatus*, *C. joyneri*, the Yosu coast, the Seto Inland Sea, ecological feature, population